
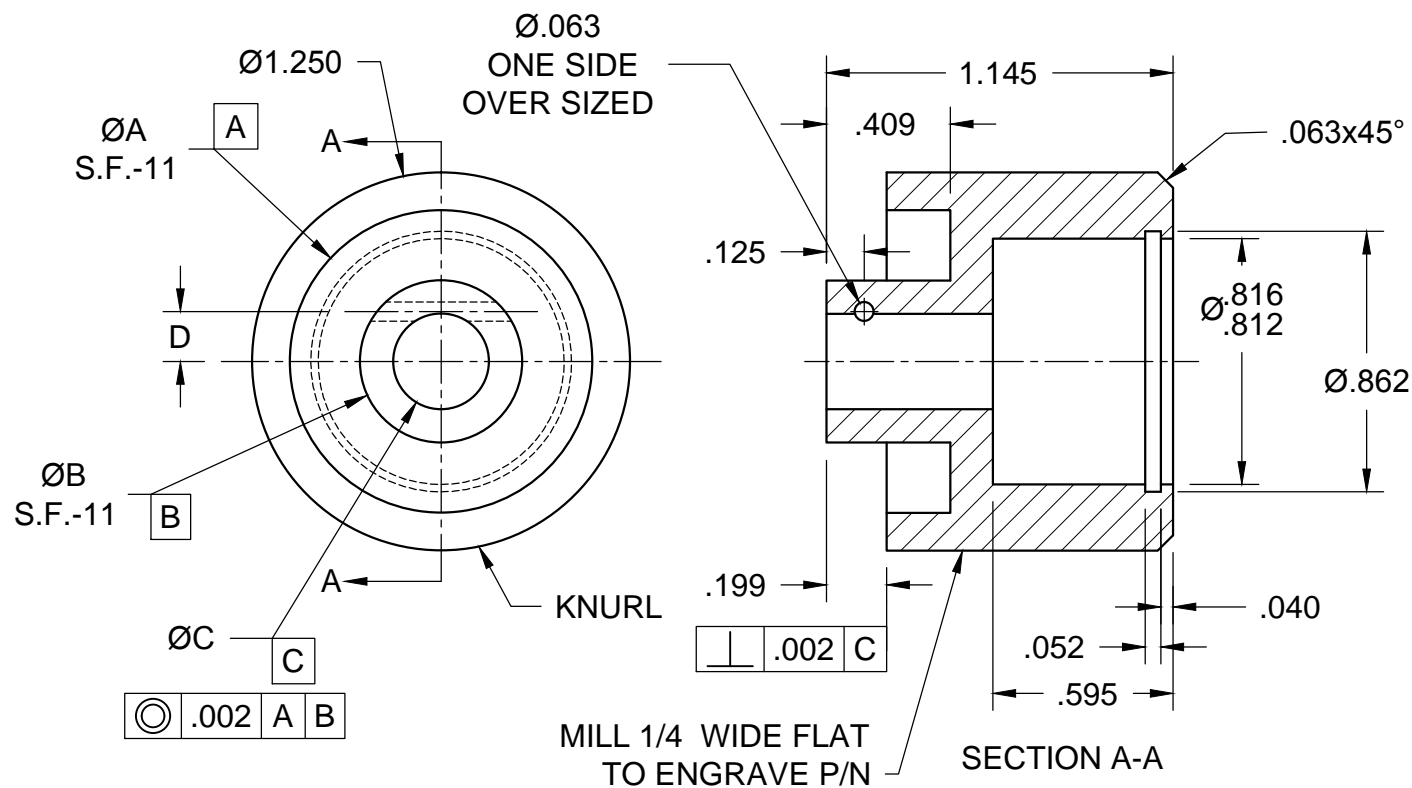


BEARING # BACB10	TOOL #	A	MATERIAL
FBO4-AMT	KSTFB04P-R	#10-24 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8

 RED BARN MACHINE			
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS			
DWG NO. TOOL#(see chart)-15 TENSIONER			REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH BLACK OXIDE SPEC USED ON BEARING SEE CHART	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		SCALE NTS	
DATE 3-21-08		SHEET 8 of 8	

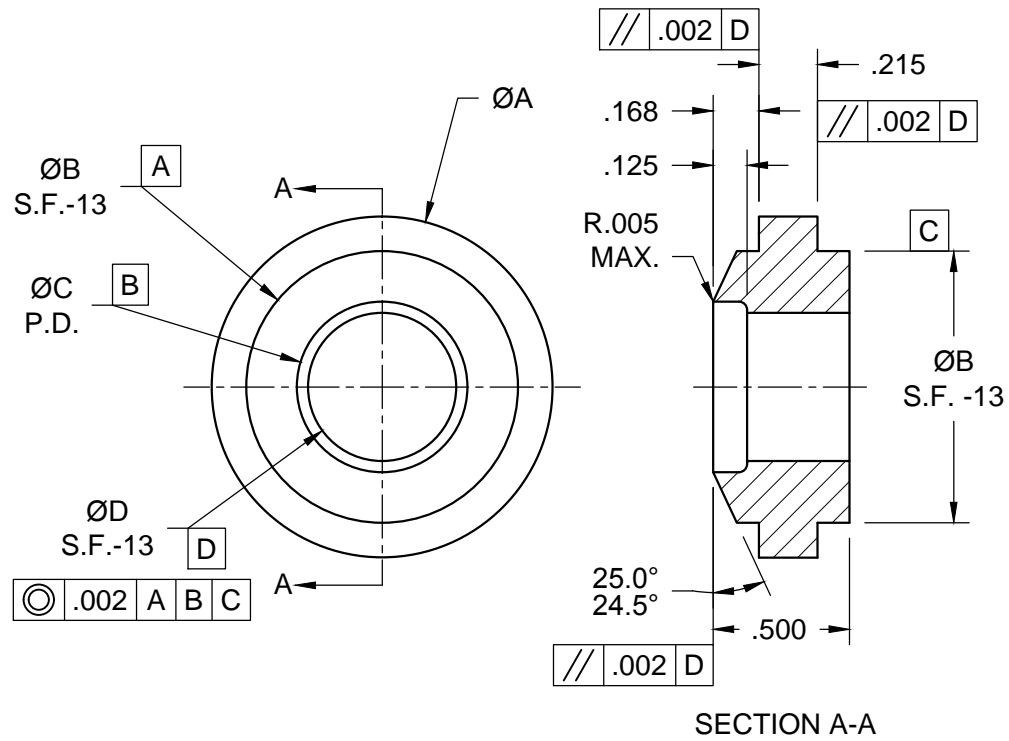
-13
RECIEVER



BEARING # BACB10	TOOL #	ØA + .005 - .000	ØB + .000 - .003	ØC + .002 - .000	D + .003 - .000	MATERIAL
FBO4-AMT	KSTFB04P-R	1.000	.536	.252	.136	4140 Q&T RND.BAR Ø1-1/4 x 1-1/4

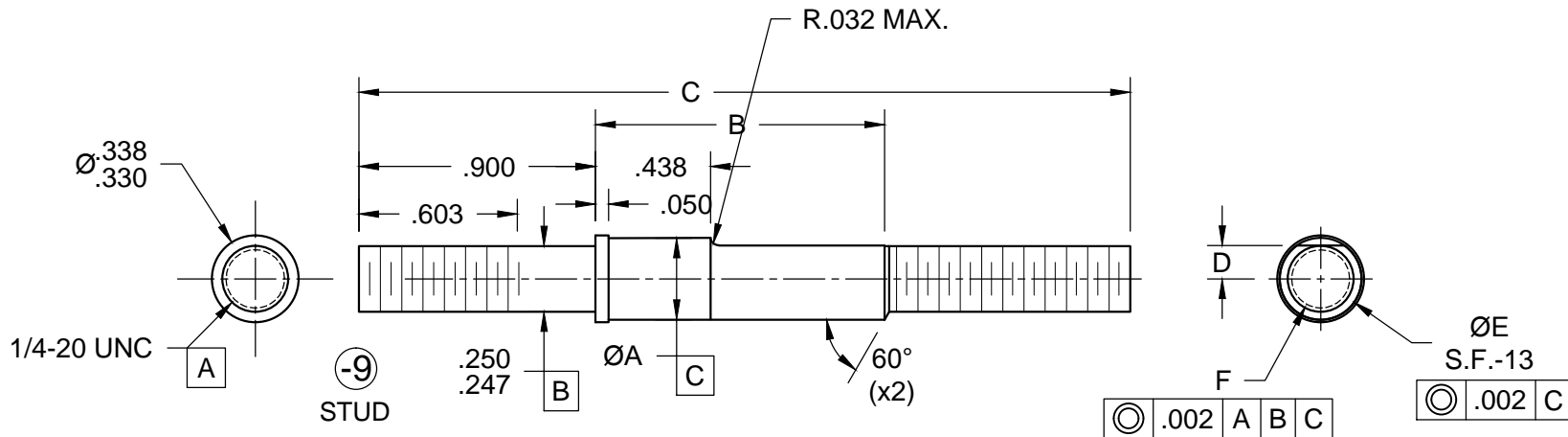
RED BARN MACHINE	
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-13 RECIEVER	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	FRACTIONS ± 1/32 ANGLES ± 5°
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3-21-08
SHEET 7 of 8	

-11
DUAL SEAT



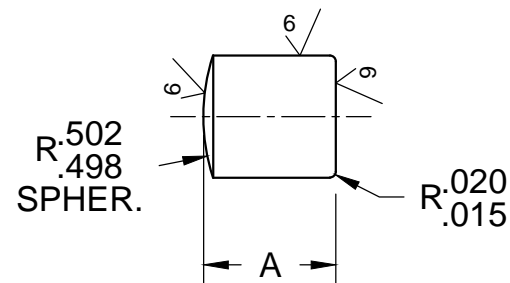
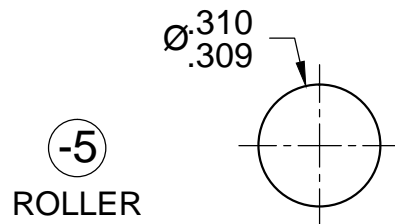
BEARING # BACB10	TOOL #	ØA +.010 -.020	ØB +.000 -.003	ØC +.002 -.000	ØD +.003 -.000	MATERIAL
FBO4-AMT	KSTFB04P-R	1.250	.996	.617	.542	4140 Q&T RND. BAR Ø1-1/4 x 5/8

RED BARN MACHINE	
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-11 DUAL SEAT	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1	DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH BLACK OXIDE SPEC USED ON BEARING SEE CHART
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	SCALE NTS
DATE 3-21-08	SHEET 6 of 8




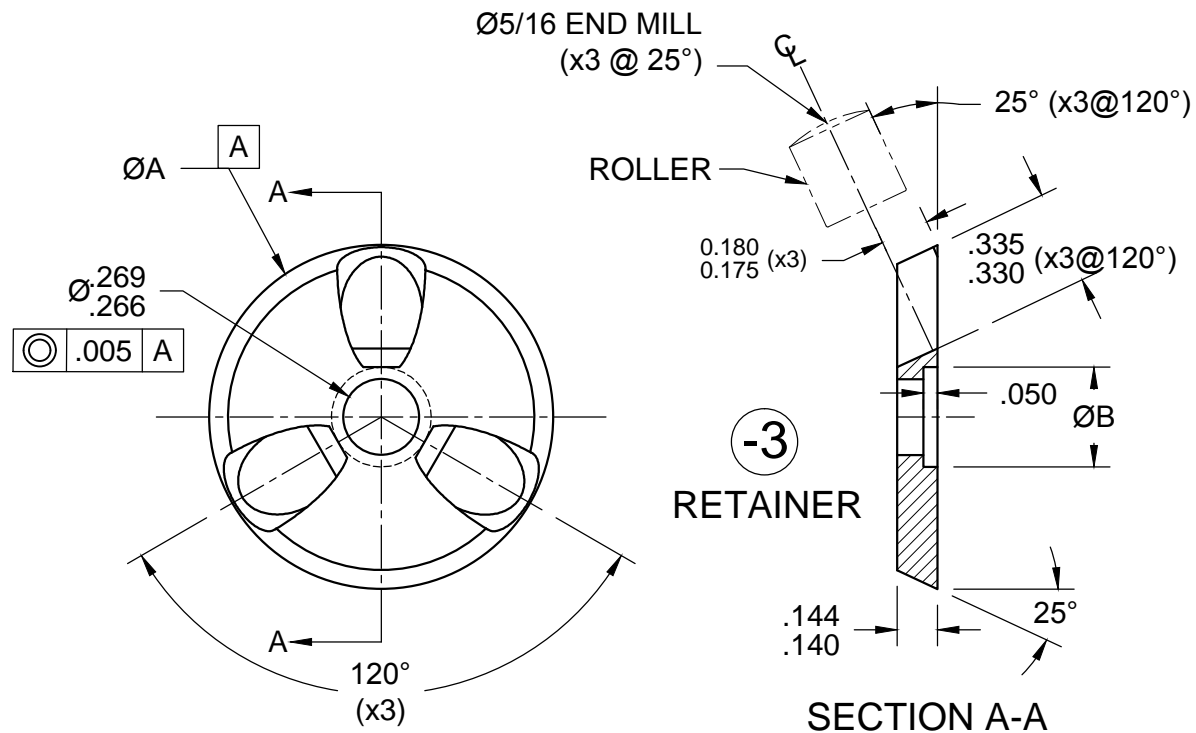
BEARING #	TOOL #	ØA	B	C	D	ØE	F	MATERIAL
BACB10		+0.000 -0.002	+0.010 -0.010	+0.010 -0.010	+0.000 -0.005	+0.000 -0.005		
FBO4-AMT	KSTFB04P-R	.248	1.040	2.563	.100	.248	#10-24 UNC	4140 Q&T RND. BAR Ø3/8 x 2-7/8

RED BARN MACHINE	
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-9 STUD	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1 FRACTIONS ± 1/32 ANGLES ± .5°	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3-21-08
SHEET 5 of 8	



BEARING # BACB10	TOOL #	A +.001 -.001	MATERIAL
FBO4-AMT	KSTFB04P-R	.335	.310 MINUS GAUGE PIN MSC #89031009

 RED BARN MACHINE			
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS			
DWG NO. TOOL#(see chart)-5 ROLLER			REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1		DRAWN BY: PERRITT APPROVED HEAT TREAT RC 55-60 FINISH SPEC	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		USED ON BEARING SEE CHART	
SCALE NTS	DATE 3-21-08	SHEET 4 of 8	

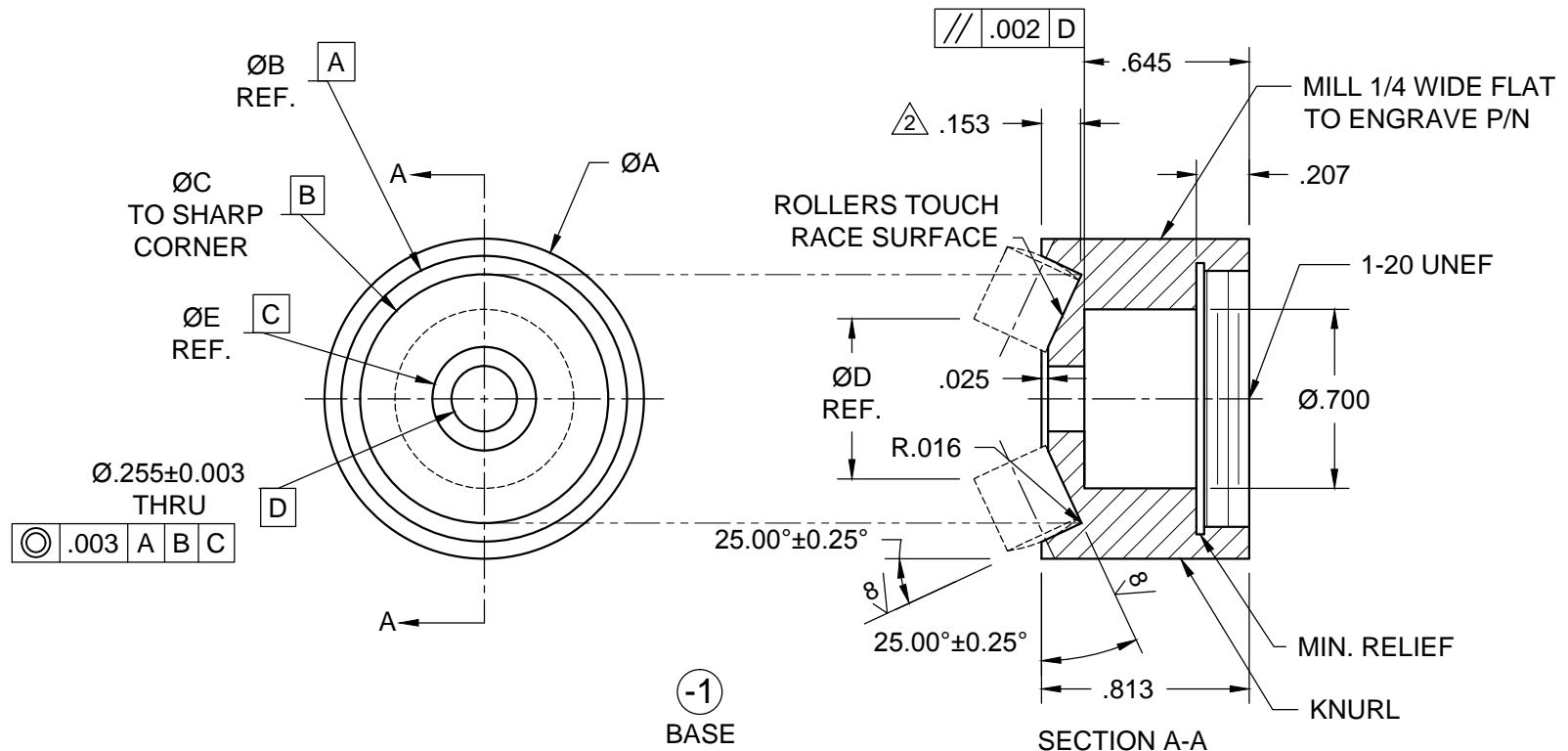


NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).

BEARING #	TOOL #	ØA +.002 -.002	ØB +.010 -.000	P.D. REF.	MATERIAL
BACB10	KSTFB04P-R	1.199	.350	.617	BRONZE RND. BAR Ø1-1/4 x 3/8
FBO4-AMT					

RED BARN MACHINE	
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-3 RETAINER	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1	
FRACTIONS ± 1/32 ANGLES ± 5°	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	
DATE 3-21-08	
SHEET 3 of 8	
DRAWN BY: PERRITT	
APPROVED	
HEAT TREAT	
FINISH SPEC	
USED ON BEARING	
SEE CHART	



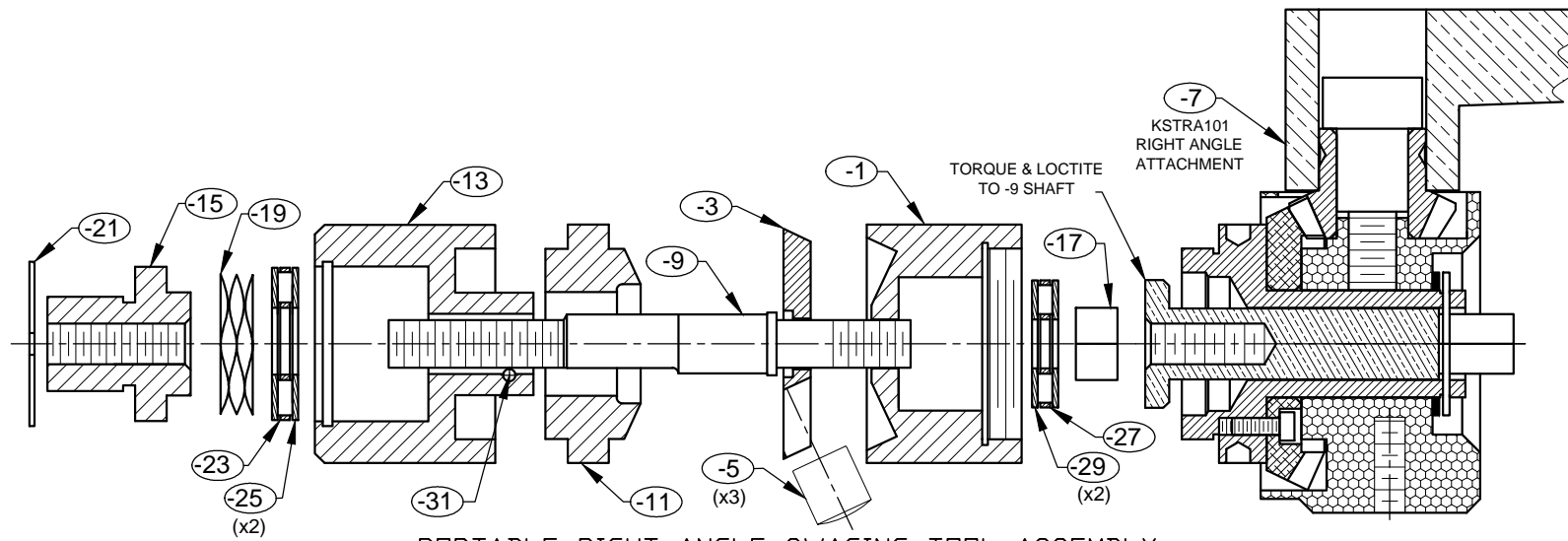
NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).
2. DIMENSION TO BOTTOM OF R.016=.153;
DIMENSION TO SHARP CORNER=.158.
3. RACE SURFACE OF -1 BASE MUST BE SMOOTH AND FREE OF GROOVES & MACHINING MARKS.
4. MUST HOLD ØC POSITION AND ANGLE TOLERANCES TO MAINTAIN PITCH DIA..
5. DO FIRST ARTICLE INSPECTION BEFORE HEAT TREATING.

BEARING #	TOOL #	ØA	ØB	ØC	ØD	ØE	MATERIAL
BACB10	KSTFB04P-R	+020 -020	+006 -002	+006 -002	P.D. REF.	+006 -002	
FBO4-AMT		1.250	1.109	.963	.617	.397	O-1 DRILL ROD Ø1-1/4 x 1

RED BARN MACHINE	
TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-1 BASE	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	DRAWN BY: PERRITT
DECIMALS .XXX ± .005	APPROVED
.XX ± .01	HEAT TREAT RC 55-60
X ± .1	FINISH BLACK OXIDE
	SPEC USED ON BEARING
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3/21/08 SHEET 2 of 8

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CHANGED -5 ROLLER RADII FROM .005 - .010, TO .015 - .020. -3 END MILL DEPTH ENLARGED FROM .329 ±.005 FOR ROLLER CLEARANCE. ALSO SHORTENED -9 'C' DIMENSION FROM 2.813 TO 2.563, AND ADDED LOCTITE NOTE FOR SHAFT.	7/7/08	WP	DW



PORTABLE RIGHT ANGLE SWAGING TOOL ASSEMBLY

NOTES

1. FLAT END OF -5 ROLLERS MUST FACE THE CENTER OF TOOL WHEN ASSEMBLED.
2. TIGHTEN -17 LOCK NUT UNTIL -3 RETAINER HAS .004 CLEARANCE OF -5 ROLLERS. -5 ROLLERS AND -3 RETAINER MUST TURN SMOOTHLY ON -1 BASE WHEN ASSEMBLED.

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
			-1	1	BASE		SEE CHART	2
			-3	1	RETAINER		SEE CHART	3
			-5	3	ROLLER		SEE CHART	4
			-7	1	RIGHT ANGLE ATTACHMENT		SEE TOOL # KSTRA101	1
			-9	1	STUD		SEE CHART	5
			-11	1	DUAL SEAT		SEE CHART	6
			-13	1	RECEIVER		SEE CHART	7
			-15	1	TENSIONER		SEE CHART	8
		B/O	-17	1	DISTORTED THREAD LOCK NUT		1/4-20 UNC x 7/32 Ht. MCMaster-CARR #95065A150	1
		B/O	-19	1	CREST TO CREST FLAT WIRE WAVE SPRING	STEEL	.750 OD., .550 ID., WIRE THICK. .013, THREE TURNS SMALLEY RING CO. #CS075-H1	1
		B/O	-21	1	INTERNAL SNAP RING	STEEL	Ø7/8 BORE MCMaster-CARR #99142A410	1
		B/O	-23	1	THRUST BEARING (SPRING SIDE)	STEEL	Ø3/8 ID. x 13/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-613)	1
		B/O	-25	2	BEARING WASHER	STEEL	Ø3/8 ID. x 13/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-613)	1
		B/O	-27	1	THRUST BEARING	STEEL	Ø1/4 ID. x 11/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-411)	1
		B/O	-29	2	BEARING WASHER	STEEL	Ø1/4 ID. x 11/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-411)	1
		B/O	-31	1	ROLL PIN	STEEL	Ø1/16 x 3/8	N/S
ASSY #								

BEARINGS & TOOLS COVERED		
BEARING #	TOOL #	
BACB10	FB04-AMT	KSTFB04P-R
BACB10		
BACB10		
BACB10		
BACB10		

RED BARN MACHINE

TITLE KSTFB##P-R SERIES PORT. RIGHT ANGLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS
 DWG NO. SEE CHART ABOVE FOR TOOL # REV 1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT	
TOLERANCES ON:		APPROVED	
DECIMALS		HEAT TREAT SEE PART	
.XXX ± .005		FINISH SEE PART	
.XX ± .01		USED ON BEARING	
.X ± .1		SEE CHART	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE	NTS	DATE	3/21/08
		SHEET	1 of 8

NOT APPROVED FOR PRODUCTION



RED BARN MACHINE

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

DRAWN BY: PERRITT	<div><div>RB</div>RED BARN MACHINE</div>		
CHECKED	TITLE		
HEAT TREAT FINISH SPEC	TITLE		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	FRACTIONS ± 1/32 ANGLES ± .5°		REV.
USED ON MODEL ?	DWG NO. PART #		
	SCALE NTS	DATE 1-28-06	SHEET 1 of 1
	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		